## **CLAIMS**

## What is claimed is:

1. A network device, comprising:

a core processor and core memory; and

a link integrity module in communication with said core processor, said link integrity module being powered separately from said core processor and said core memory;

said network device including a D3 type cold power mode wherein said link integrity module maintains power.

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2. The network device according to claim 1, wherein:

in said D3 type cold power mode, said network device removes power from said core memory.

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3. The network device according to claim 1, wherein:

The network device according to claim 1, further

in said D3 type cold power mode, said network device removes power from said core processor.

20 comprising:

a network interface.

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5. The network device according to claim 1, wherein: said network device is a HomePNA device.

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6. The network device according to claim 1, wherein: said network device is a BLUETOOTH device.

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7. The network device according to claim 1, wherein: said network device is a Homeplug device. 8. The network device according to claim 1, wherein: said network device is a wired device. 9. The network device according to claim 8, wherein said wired device is one of: a HomePNA device; and a G.989.1 compliant device. 10. The network device according to claim 1, wherein: said network device is a power line device. 11. The network device according to claim 10, wherein: said power line device is a Home Plug device. 12. The network device according to claim 1, wherein: said network device is a wireless device. 13. The network device according to claim 12, wherein said wireless device is one of: a HomeRF device; and a IEEE 802.11 compliant device. 14. The network device according to claim 1, wherein:

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device.

said wireless device is an optical communications network

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	15. The network device according to claim 14, wherein:
	said optical communications network device is an Infrared
device.	
	<ol><li>A method of maintaining data-based link integrity in a</li></ol>
powered dov	n network device, comprising:

providing a link integrity module powered separately from core functionality in said network device; and

removing power from said core functionality of said network device while maintaining power to said separately powered link integrity module.

17. The method of providing data-based link integrity in a powered down mode according to claim 16, wherein:

said network device is a HomePNA device.

18. The method of providing data-based link integrity in a powered down mode according to claim 16, wherein:

said network device is a BLUETOOTH device.

19. The method of providing data-based link integrity in a powered down mode according to claim 16, wherein:

said network device is a Homeplug device.

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20. Apparatus for maintaining data-based link integrity in a powered down network device, comprising:

means for providing a link integrity module powered separately from core functionality in said network device; and

means for removing power from said core functionality of said network device while maintaining power to said separately powered link integrity module.

21. The apparatus for providing data-based link integrity in a powered down mode according to claim 20, wherein:

said network device is a HomePNA device.

22. The apparatus for providing data-based link integrity in a powered down mode according to claim 20, wherein:

said network device is a BLUETOOTH device.

23. The apparatus for providing data-based link integrity in a powered down mode according to claim 20, wherein: said network device is a Homeplug device.

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24. A method of providing both physical and data-based link integrity capability in a network, comprising:

determining if another network device in said network requires physical link integrity signaling;

if another network device in said network requires physical link integrity signaling, outputting a data-based link integrity packet in a physical link integrity mode; and

if no other network device in said network requires physical link integrity signaling, outputting a data-based link integrity packet in a non-physical link integrity mode.

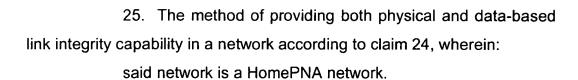
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26. The method of providing both physical and data-based link integrity capability in a network according to claim 24, wherein: said another network device requiring physical integrity signaling is a HomePNA version 1.0 device.

27. Apparatus for providing both physical and data-based link integrity capability in a network, comprising:

means for determining if another network device in said network requires physical link integrity signaling;

means for outputting a data-based link integrity packet in a physical link integrity mode if another network device in said network requires physical link integrity signaling; and

means for outputting a data-based link integrity packet in a non-physical link integrity mode if no other network device in said network requires physical link integrity signaling.

28. The apparatus for providing both physical and databased link integrity capability in a network according to claim 27, wherein: said network is a HomePNA network.

29. The apparatus for providing both physical and databased link integrity capability in a network according to claim 27, wherein: said another network device requiring physical integrity signaling is a HomePNA version 1.0 device.

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